VULCAN

INSTALLATION & OPERATION MANUAL

GCO2D & GCO2C GAS CONVECTION OVENS

MODEL	
GCO2D	ML-114569
GCO2C	ML-114571

GCO2D

VULCAN-HART COMPANY, P.O. BOX 696, LOUISVILLE, KY 40201-0696, TEL. (502) 778-2791

FORM 30975 Rev. B (2-98)

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

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Installation, Operation, and Care of MODEL GCO2D AND GCO2C GAS CONVECTION OVENS

KEEP THESE INSTRUCTIONS FOR FUTURE USE

Your Vulcan Gas Convection Oven is produced with quality workmanship and material. Proper installation, usage and maintenance of your oven will result in many years of satisfactory performance.

Vulcan-Hart Company suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

GENERAL

The GCO2D Gas Convection Oven is a single cavity oven and features a solid state thermostat, 1-hour dial timer, and five racks as standard equipment. Each oven is equipped with a 25,000 Btu/hr burner and a ½ horsepower electric motor for 120 V. single phase electrical service. The oven has a porcelain interior; a stainless steel interior is available optionally.

Model GCO2C is the same as GCO2D, except it has electronic controls, and is also equipped with a roast and hold function.

Models GCO22D and GCO22C consist of two single ovens and are furnished with a stacking kit for mounting one oven on top of the other.

A single oven may be installed on an open stand with lower storage rack (optional).

Additional oven racks are available as optional accessories.

Features of the models are shown below:

MODEL	THERMOSTAT (Each Oven)	TIMER (Each Oven)	STACKING KIT	ROAST & HOLD	GENTLE BAKE
GCO2D	Solid State	1-Hour Dial			
GCO22D	Solid State	1-Hour Dial	X		
GCO2C	Electronic	Electronic		X	X
GCO22C	Electronic	Electronic	X	X	X

INSTALLATION

UNPACKING

Immediately after unpacking the oven, check for possible shipping damage. If this oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Prior to installation, verify that the electrical supply and type of gas supply (natural or propane) agree with the specifications on the oven data plate, located **on the inside of the top front cover.**

Do not use the door or its handle to lift the oven.

LOCATION

The equipment area must be kept free and clear of combustibles. Maintain clearances from combustible or noncombustible construction for at least 3" (76.2mm) from the side and 3" (76.2mm) from the back of the oven. The installation location must allow adequate clearances for servicing and proper operation.

The oven must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to allow for that required for combustion of gas at the oven burners.

INSTALLATION CODES AND STANDARDS

Vulcan gas ovens must be installed in accordance with:

In the United States

1. State and local codes.

2. National Fuel Gas Code, ANSI-Z223.1 (latest edition), available from American Gas Association, 1515 Wilson Boulevard, Arlington, VA 22209.

3. ANSI/NFPA 96, "Vapor Removal from Cooking Equipment" (latest edition), available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

4. National Electrical Code, ANSI/NFPA-70 (latest edition).

In Canada

1. Local codes.

2. CAN/CGA-B149.1, "Natural Gas Installation Code" (latest edition).

3. CAN/CGA-B149.2, "Propane Installation Code" (latest edition), available from the Canadian Gas Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3.

4. Canadian Electrical Code, CSA Standard C22.2 No. 3 (latest edition), “Electrical Features of Fuel Burning Equipment.”

INSTALLING BASIC OVEN

The basic oven must be installed on legs or be mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty.

NOTICE: When the oven is mounted on casters, it must be installed with the casters supplied, a connector (not supplied by Vulcan-Hart) complying with either ANSI Z21.69 (latest edition) or CAN/CGA-6.16 (latest edition), and a quick-disconnect device complying with either ANSI Z21.41 (latest edition) or CAN1-6.9 (latest edition). It must also be installed with restraining means to guard against transmission of strain to the connector, as specified in the appliance manufacturer's instructions. Attach the restraining device at the rear of the oven (Fig. 1).

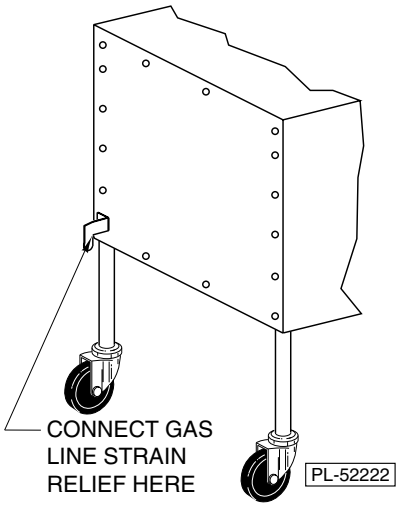


Fig. 1

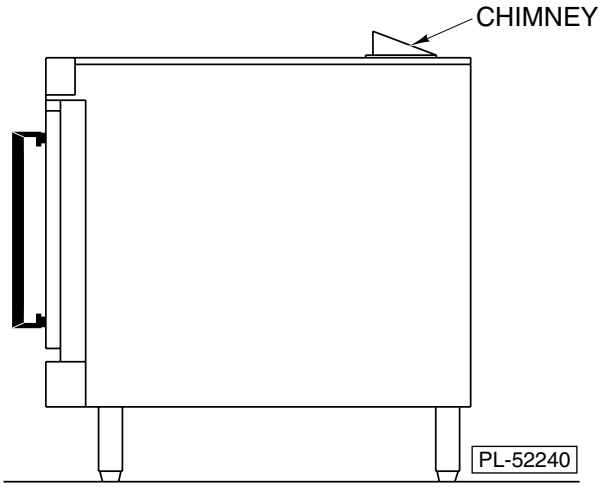


Fig. 2

Assembling the Legs to the Single Oven

The 4" (101.6mm) legs are packed inside the oven during shipment and must be installed on the bottom of the oven. Place the oven on its left side, being careful to avoid scratching the finish. The gas pipe connection protrudes beyond the back; provide for this when oven is tipped back by resting it on suitable spacers (2 x 4's etc.).

Thread each of the four leg assemblies into the holes provided on the bottom corners of the oven. Carefully raise the oven to its normal upright position.

Assembling the Chimney to the Single Oven

Remove the oven chimney from inside the oven cavity and use the screws provided to fasten the chimney to the top rear of the oven (Fig. 2). The flanges on the chimney are to be positioned over the top cover.

LEVELING

Once the oven is in its permanent position, place a carpenter's level on the oven rack. If the oven is installed on legs, turn adjustable feet in or out to level oven front-to-back and side-to-side. If the oven is installed on casters, loosen set screws and turn casters in or out to level oven front-to-back and side-to-side. Retighten set screws after leveling.

ASSEMBLING STACKED OVENS

Determine which oven will be on the bottom and place it on its left side, being careful to avoid scratching the finish. Install the four 16¾" (42.5cm) legs, using the 24 bolts and lockwashers provided (6 per leg).

Remove the two 7/16" (11.1mm) knockouts on each side of the top cover and place oven in upright position at installation location. Turn the adjustable feet in or out to level the oven front-to-back and side-to-side (see LEVELING on page 6).

Remove right-hand side panels from both ovens. Remove welded plate from bottom of upper oven (Fig. 3). Install the two locating studs (included in the leg stack set) into screw plates on underside of upper oven (Fig. 3). Place upper oven on top of lower oven using the locating studs.

Remove flue extension from upper oven. Install long flue extension into existing right-angled flue extension in lower oven. Attach long flue extension to wall of upper oven using screws provided. Secure chimney to roof of upper oven (Fig. 4).

Install right side panels on both ovens. Connect the piping between the top oven and bottom oven. Pipe compound must be suitable for the type of gas being used (natural or propane).

The manual gas valve at the bottom of the control panel should remain off until all electrical connections are made and the ovens are checked or used.

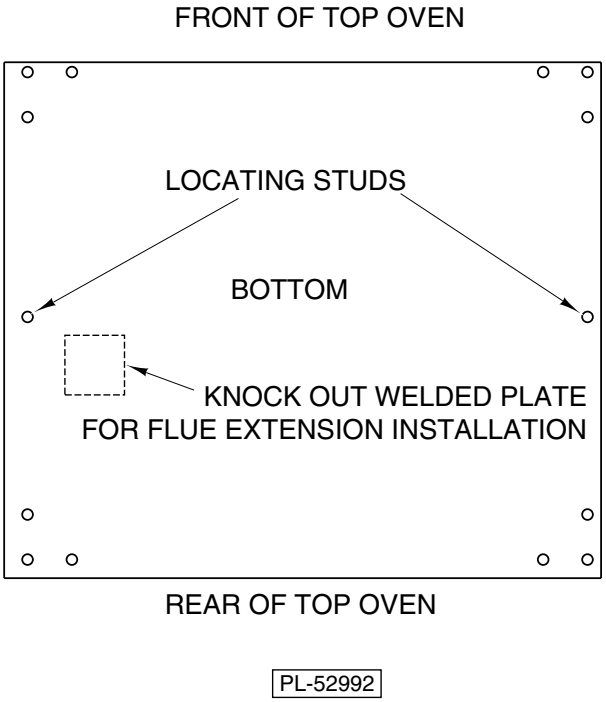


Fig. 3

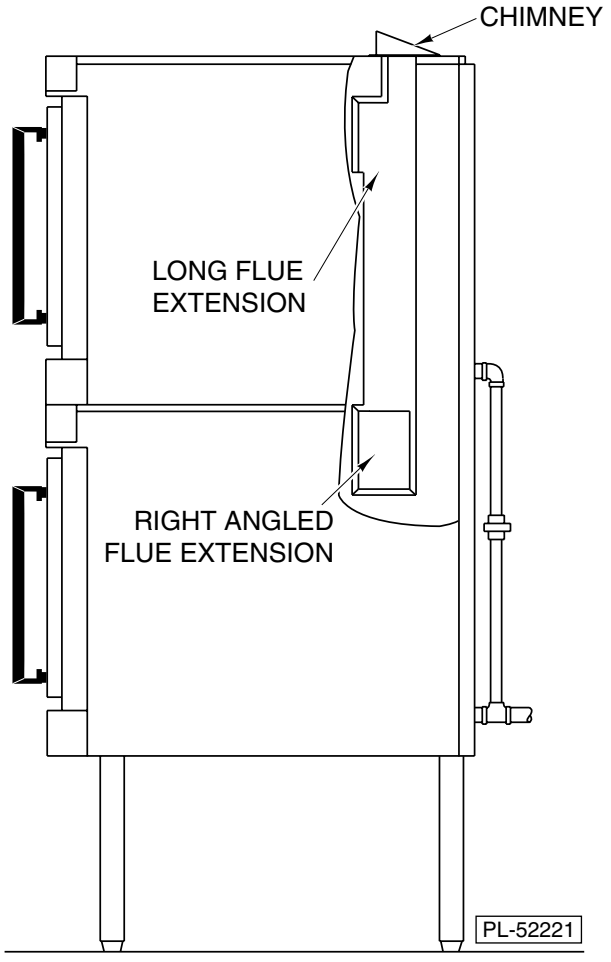


Fig. 4

ASSEMBLING THE OVEN TO THE STAND

Unpack the oven and stand. Position oven on its back, taking care not to scratch or damage it. The gas pipe connection protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4's etc.).

Install the two locating studs (included in the stand carton) into the screw plates on the underside of the oven (see Fig. 3).

Attach each of the four leg assemblies to the bottom of the stand with the 24 bolts and lockwashers (6 per leg).

Mount the oven on top of the stand.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

WARNING: APPLIANCES EQUIPPED WITH A FLEXIBLE ELECTRIC SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. IT IS IMPERATIVE THAT THIS PLUG BE CONNECTED INTO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THIS PLUG.

The 120 volt models have a cord and plug attached and do not have to be wired.

When installed, the appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA No. 70 (latest edition).

Refer to electrical wiring diagram located inside the right side panel; remove control panel for access.

Do not turn the power supply on until after the gas connections have been made and checked for leaks.

GAS AND ELECTRICAL DATA

	GAS DATA				ELECTRICAL DATA	
	INPUT BTU/HR		MANIFOLD PRESSURE		Load	AMP/LINE
	Natural	Propane	Natural	Propane	(Watts)	120 V
Single Oven	25000	25000	3.5" w.c. (0.8 kPa)	10" w.c. (2.5 kPa)	950	8
Stacked Ovens	50000	50000	3.5" w.c. (0.8 kPa)	10" w.c. (2.5 kPa)	1900	16

GAS CONNECTIONS

All gas supply connections and any pipe joint compound used must be resistant to the action of propane gases.

The oven is provided with a regulator integral to the gas solenoid valve, and requires no regulator external to the device.

A gas shutoff valve is supplied with each oven and is located at the bottom of the control panel. No tools are required to access this valve.

Connect the oven(s) to the gas line after leveling. The gas supply line must be at least the equivalent of ¾" (19mm) iron pipe. Make sure the pipes are clean and free of obstructions, dirt and piping compound.

WARNING: PRIOR TO LIGHTING, CHECK ALL JOINTS IN THE GAS SUPPLY LINE FOR LEAKS. USE SOAP AND WATER SOLUTION. DO NOT USE AN OPEN FLAME.

TESTING THE GAS SUPPLY SYSTEM

The oven and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures greater than ½ psig (3.45 kPa).

The oven must be isolated from the gas supply piping system by closing the manual shutoff valve during pressure testing of the gas supply system at test pressures equal to or less than ½ psig (3.45 kPa).

GAS PRESSURES AND ORIFICES

Natural Gas

The burner orifices are sized to deliver the nameplate input rating (25,000 Btu/hr) at a gas manifold pressure of 3.5" w.c. (water column) (0.8 kPa). The gas pressure regulator is integral to the gas solenoid valve, and is factory set to supply 3.5" w.c. (0.8 kPa) as required for natural gas.

Propane Gas

The burner orifices are sized to deliver the nameplate input rating (25,000 Btu/hr) at a gas manifold pressure of 10.0" w.c. (water column) (2.5 kPa). The gas pressure regulator is integral to the gas solenoid valve, and is factory set to supply 10.0" w.c. (2.5 kPa) as required for propane gas.

BURNER AIR SHUTTER ADJUSTMENTS

The burner has fixed, factory adjusted air openings and requires no field adjustment.

FLUE CONNECTIONS

Ventilation requirements will vary with each installation and must comply with applicable portions of National Fire Protection Association Standard #96 and with local codes. Considerations to be kept in mind include:

Flue connections should never be made directly to the oven.

The oven should be located under a hood which has an adequate connection to an exhaust duct and extends six inches beyond the oven sides.

Clearance above the oven flue should be adequate for the flue products to escape so that there is no interference with the heat circulation in the ovens. Refer to the standard for "Vapor Removal from Cooking Equipment," NFPA #96 (latest edition).

OPERATION

CONTROLS — MODEL GCO2D (Fig. 5)

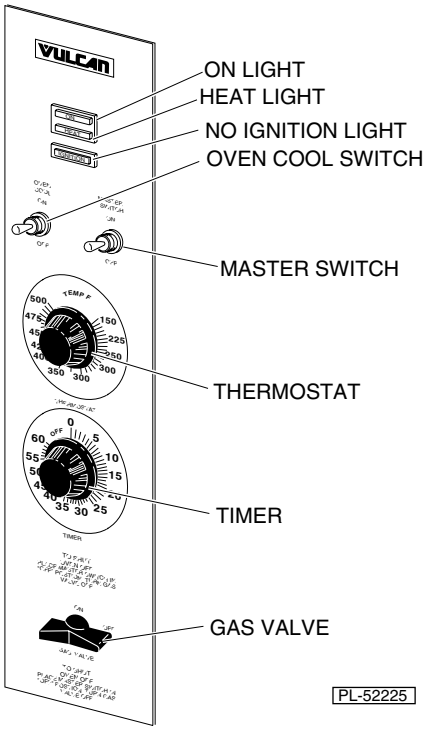


Fig. 5

MASTER SWITCH — ON — Turns oven control circuits on.
OFF — Turns oven control circuits off.

OVEN COOL SWITCH — Allows the fan motor to run with the doors ajar to speed oven cooling.

THERMOSTAT — Controls oven temperature during cooking operation.

TIMER — Use to set cooking cycle time. The timer range is from 0 to 60 minutes. Alarm sounds continuously when elapsed time counts down to 0; oven does not turn off. Turn timer to OFF position to stop alarm. When oven is not in use, keep timer at OFF position.

ON LIGHT (Amber) — Lit when the MASTER SWITCH is positioned at ON.

HEAT LIGHT (White) — Comes on and goes off when the burner cycles on and off.

NO IGNITION LIGHT (Red) — Comes on if burner fails to ignite after the third try. When lighting oven, the NO IGNITION LIGHT cycles ON during the 5-second purge and OFF during the 7-second ignition trial.

GAS VALVE — When ON, allows gas to flow to the ignition system.

LIGHTING THE GCO2D OVEN

Open the manual valve. Turn the MASTER switch ON and turn the thermostat to its maximum setting. Both the ON and HEAT lights should be lit. If the HEAT light is not on, make sure the door is closed.

After 5 seconds, the spark ignition system will initiate and the solenoid valve will open, allowing gas flow to the burner for a period of 7 seconds. This 5-second purge and 7-second ignition trial will repeat itself up to two more times if the burner does not light within the first 7-second ignition trial. During the 5-second prepurge, the red NO IGNITION light will be lit.

When the burner gas ignites, a slight "roar" will be audible. This "roar" is a normal condition of the power burner, and will become almost undetectable in the normal operating mode after warm-up. The NO IGNITION light will go off when ignition occurs.

If the burner fails to light after three trials, the red NO IGNITION light will be illuminated and remain on. Turn the MASTER switch to OFF for five minutes before repeating the operating sequence listed above.

If burners do not light after five trials, turn off the manual valve and call a qualified servicer.

BEFORE FIRST USE

Before the oven is used for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

Using a clean damp cloth, wipe the inside of the oven, including the racks.

Close the oven door, turn the MASTER switch ON, turn the thermostat to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before turning the switch OFF.

USING THE GCO2D OVENS

Preheating

1. Turn MASTER switch ON. The amber ON light will come on, indicating that power to the oven is on.

2. Set the THERMOSTAT as desired. Refer to SUGGESTED TIMES AND TEMPERATURES FOR BAKING AND ROASTING — MODEL GCO2D for suggested temperatures and times for various products.

3. Prepare product and place in suitable pans. When the white HEAT light goes off, the oven has reached desired preheat temperature.

Cooking

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.

2. Set the TIMER. After the preset time lapses, turn timer to OFF position to stop the buzzer.

3. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

End of Day

1. Turn THERMOSTAT to OFF.
2. Turn OVEN COOL switch ON.
3. Leave door ajar while the fan is on to cool the oven.
4. When oven has cooled sufficiently, turn OVEN COOL switch and MASTER switch to OFF and clean oven.

CONTROLS — MODEL GCO2C (Fig. 6)

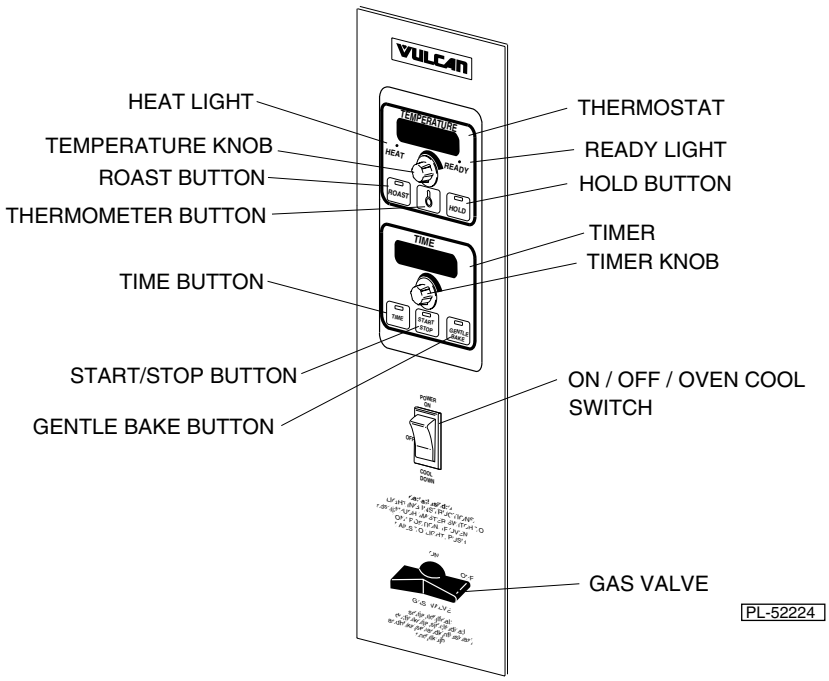


Fig. 56

THERMOSTAT CONTROL

Temperature Display (When Not Timing Product)

Displays set cook temperature while the light in the Roast Button is lit. Will be overridden to display actual cavity temperature for 8 seconds when Thermometer Button is pushed.

1. The light in the Thermometer Button will be lit while the actual temperature is being displayed.

2. The light in the Thermometer Button will extinguish when the display returns to set temperature display.

Temperature Display (When Timing Product)

Displays set hold temperature while the light in the Hold Button is lit. Displays the roast temperature when the Roast Button is lit. Will be overridden to display actual cavity temperature for 8 seconds when the Thermometer Button is pushed.

1. The light in the Thermometer Button will be lit while actual temperature is being displayed.

2. The light in the Thermometer Button will extinguish when the display returns to set temperature display.

Temperature Knob (When Not Timing Product)

1. Sets the roast temperature when the Roast Button light is lit. The Roast Button light can be turned on by pressing the Roast Button.

2. Sets the hold temperature when the Hold Button light is lit. The Hold Button light can be turned on by pressing the Hold Button.

Temperature Knob (When Timing Product)

1. Sets the roast temperature when the Roast Button light is lit. The Roast Button light cannot be changed by pressing the Roast Button.

2. Sets the hold temperature when the Hold Button light is lit. The Hold Button light cannot be changed by pressing the Hold Button.

Roast Button Light (If On) - (While Not Timing Product)

Indicates the roast mode is selected. This means:

1. The displayed temperature settings will be for the roast temperature except for the time that the light in the Thermometer Button is lit.

2. Rotating the Thermostat Knob will change the roast set temperature.

3. Cook time can be adjusted using the Timer Knob.

4. The time displayed is the initial set cook time.

5. It is possible to select the Hold mode using the Hold Button.

Roast Button Light (If On) - (While Timing Product)

Indicates the roast mode is selected. This means:

1. The displayed temperature settings will be for the roast temperature except for the time that the light in the Thermometer Button is lit.

2. Rotating the Temperature Knob will change the roast set temperature.

3. It is not possible to select the Hold mode using the Hold Button.

4. The time displayed is the time counted down from the initial cook time set.

Roast Button

1. Lights the Roast Button light. See Roast Button Light above.

2. Selects the Roast mode.

3. Has no effect if timing in the Hold mode.

Thermometer Button

When pressed, causes actual cavity temperature to display for about 8 seconds, then display returns to set temperature.

Heat Light

When lit, indicates that power is being supplied to the burner.

Ready Light

Will be lit any time the actual temperature is within +/- 5°F (+/- 2.7°C) of the set temperature for the current mode.

TIMER CONTROL

Time Display (While Not Timing Product)

Displays the set cook time if the light in the Roast Button is lit.

Time Display (While Timing Product)

1. Displays the counted down cook time if the Roast Button light is lit and in the Roast mode.

2. Displays the counted up hold time if the Hold Button light is lit and in the Hold mode. Count-up of hold time does not begin until cavity temperature reaches the hold temperature.

Time Display Semicolon

1. Flashing if product is timing.

2. Not flashing if not timing product.

Time Button

Press to set cooking cycle time.

Time Button Light

Illuminates when the Time Button is pressed.

Timer Knob

Sets the cook time when not already timing and the Cook Time indicator is lit.

Gentle Bake Button

Selects the gentle bake time setting. A roast time must be set first. The gentle bake time can then be set equal to or less than the roast time. The gentle bake time will be the portion of roast time to operate in the gentle bake mode. Gentle bake mode will start first. When gentle bake time elapses, the remainder of the roast time will be in the non-gentle bake mode.

Use when cooking delicate product, such as strudel, muffins, cupcakes, meringue pies, etc., to keep product from forming "waves" on the top.

Use the Gentle Bake Button to switch between the selection of gentle bake mode and no gentle bake mode time setting. A gentle bake mode time of zero means no gentle bake mode will occur.

The light in the Gentle Bake Button will be lit when in the gentle bake mode.

In Gentle Bake Mode:

1. The fan cycles (45 seconds ON and 45 seconds OFF) for the duration of the gentle bake cycle time.
2. The fan stays on while the heat cycles in hold mode.
3. The fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

Stop/Start Button

1. Initiates timing a product in the mode selected if a cook time has been set.
2. Stops timing of a product if a timing sequence has already started.

Hold Button

Selects Hold mode.

1. Allows selection of hold temperature.
2. Temperature indication of ---°F (---°C) indicates no hold mode.

Hold Button Light

Is lit when in the Hold mode.

1. When not timing, allows setting/enabling a hold mode setting of ---°F (---°C), meaning no hold will take effect.
2. Any other temperature means that when the actual cook time has ended, the oven will enter the Hold mode and use the hold temperature.

ON/OFF/OVEN COOL SWITCH

1. ON turns oven control circuits on.
2. OFF turns oven control circuits off.
3. OVEN COOL allows the fan motor to run with the doors ajar to speed oven cooling.

GAS VALVE

When ON, allows gas to flow to the ignition system.

LIGHTING THE GCO2C OVEN

1. Turn manual gas valve ON.
2. Push ON/OFF/OVEN COOL switch to the ON position and set THERMOSTAT to its maximum setting. The HEAT light should come on. If HEAT light is not on, make sure the door is closed.
3. If the oven fails to light, push ON/OFF/OVEN COOL switch to the OFF position. Wait 5 minutes before trying to relight the oven.

BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean damp cloth, wipe the inside of the oven, including the racks.
2. Close the oven doors, push the ON/OFF/OVEN COOL switch to the ON position, turn the THERMOSTAT to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before turning the ON/OFF/OVEN COOL switch OFF.

USING THE GCO2C OVEN

Preheating

1. Close oven doors. Push ON/OFF/OVEN COOL switch to ON position. The HEAT light will come on, indicating that power to the oven is on.
2. Set THERMOSTAT as desired. Refer to SUGGESTED TIMER SETTINGS FOR ROLLED BEEF ROASTS — MODEL GCO2C for suggested temperatures and times.
3. Prepare product and place in suitable pans. When READY light comes on, oven has reached desired preheat temperature.

Cooking

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.

2. Set ROAST temperature and time. Set HOLD temperature and GENTLE BAKE time, if desired. GENTLE BAKE time may not be more than ROAST time. GENTLE BAKE will cycle the fan during the set time at the beginning of the cooking cycle.

3. Press the START/STOP button to start the cooking cycle.

4. At the end of the cooking cycle, the buzzer will sound continuously if the HOLD mode is OFF. If the HOLD mode is ON, there will be a short beep at the beginning of Second Stage Cooking (oven temperature will begin to decline to the HOLD temperature), and a long beep (20 seconds) at the end of the cooking cycle. (See ROAST AND HOLD OPERATION.)

5. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

End of Day

1. Push ON/OFF/OVEN COOL switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.

2. When the oven has cooled sufficiently, push the ON/OFF/OVEN COOL switch to the OFF position and clean the oven.

ERROR MESSAGES — GCO2C OVEN

E-01 High limit error. Contact your local Vulcan authorized service representative.
E-02 Low limit error. Contact your local Vulcan authorized service representative.
E-03 High ambient temperature (215°F/101.7°C). Contact your local Vulcan authorized service representative.
E-04 Low ambient temperature (32°F/0°C). Let control warm up after cold storage.
E-05 Ignition failure. After trying ignition three times, contact your local Vulcan authorized service representative.
E-06 Thermocouple probe open. Contact your local Vulcan authorized service representative.

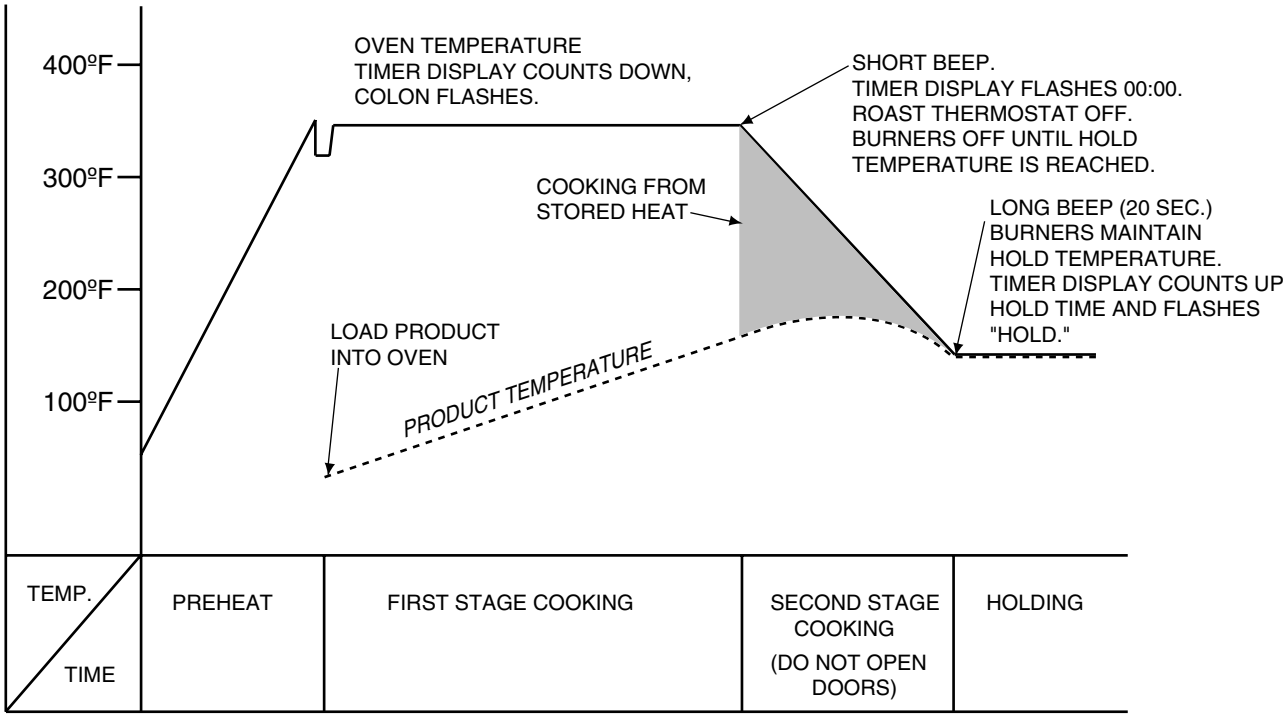
When calling for service, please advise what error code was displayed.

ROAST AND HOLD OPERATION — GCO2C OVEN

Roast and Hold cooks the product in two stages. During First Stage Cooking, the oven temperature is regulated by the Roast thermostat for the amount of time set on the Timer. After the lapsed time counts down to 00:00, Second Stage Cooking begins. During Second Stage Cooking, the burners are off as the temperature in the oven declines to the Hold Temperature. The doors should remain closed during Second Stage Cooking.

When the Hold temperature is reached, cooking is done. The Time Display counts up the Hold time and flashes "Hold." Temperature in the oven will be maintained at the Hold temperature until the oven is turned off.

ROAST AND HOLD DIAGRAM - Time vs. Temperature



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PROPER UTENSILS

The use of proper utensils can enhance oven operation. Medium- and lightweight pans are recommended since it is more economical to bake with lighter pans.

Meats should be roasted in shallow pans deep enough to hold all juices and allow free air circulation.

CONSERVING ENERGY

- Turn off unused equipment.
- Adjust menu patterns and cooking/baking schedules for optimum equipment use.
- Reduce thermostat settings in slack periods since gas equipment heats up and recovers quickly.
- Preheat only to required cooking temperature for specific food - not higher.
- Do not open the oven door unless absolutely necessary. Use the window to observe cooking progress.
- Keep area around the oven door clean and free of food particles.
- Any obstruction that prevents the door from closing completely will adversely affect oven efficiency.

OPERATING HINTS

When using the convection oven for the first time with a particular food, check the degree of doneness periodically before the suggested time has elapsed, to make sure the desired doneness is achieved.

Record your temperature and time settings for various products. The convection oven can provide consistent, repeatable results.

The convection oven is a bit faster than conventional deck-type ovens; temperature settings are lower and cook times are shorter. Since recipes and foods are subject to many variations and tastes, the guidelines regarding times and temperatures in this manual are SUGGESTIONS ONLY. Experiment with your food products to determine the cooking temperatures and times that give you the best results.

CLEANING

WARNING: TURN OVEN OFF AND UNPLUG ELECTRICAL CORD BEFORE CLEANING.

Clean outside of the oven daily by wiping with a clean damp cloth.

Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly and wipe dry with a soft clean cloth.

Optional Stainless Steel Oven Interior

Soap or detergent and water usually handle routine cleaning. Rinse thoroughly and dry with a soft clean cloth.

For burned-on foods and grease which resist simple soap and water cleaning, an abrasive cleanser (scouring powder) mixed into a paste may be used. Apply with stainless steel wool or sponge, always rubbing with the "grain."

This treatment is equally effective for "heat tint" (slightly darkened areas caused by oxidation). Again, remember to rub in the direction of the polish lines. Rinse with clear water and dry with a soft cloth.

COOKING CHARTS
Models GCO2D and GCO2C

BAKED PRODUCTS

Product	Temp. (°F)	(°C)	Time (min.)	No. Shelves	Fan Speed
Sheet Cakes (5 lb. each) (2.3 kg)	300	(149)	30	5	Low
Soda Biscuits	325	(163)	12	5	Low
Yeast Rolls	325	(163)	15-20	5	Low
Corn Bread	300	(149)	15	5	Low
Gingerbread	300	(149)	18	3	Low
Chocolate Cake	325	(163)	20	5	Low
Chocolate Chip Cookies	325	(163)	10	5	Low
Sugar Cookies	326	(163)	12	5	Low
Yellow Cake	300	(149)	25	5	Low
Angel Food Cake	275	(135)	25	5	Low
Brownies	350	(177)	15-20	5	Low
Apple Turnovers	350	(177)	20-25	5	Low
Cream Puffs	300	(149)	25-30	5	Low
Apple Pie (Fresh)	350	(177)	30	5	High
Pumpkin Pie	275	(135)	40	5	High
Berry Pies (Frozen)	325	(163)	40	5	High
Fruit Pie (Frozen)	325	(163)	45	5	High
Pizza (Individual, Frozen) (Precooked Crust)	310-325	(154-163)	8-13	5	Low/High*
Bread (1 lb. loaf) (454 gr.)	340	(171)	30	3	High/Low**
Brown and Serve Rolls	350	(177)	15	5	Low
Coffee Cake	300	(149)	45	3	High
Pineapple Upside Down Cake	325	(163)	30	5	High
Fruit Cobbler	375	(190)	25	5	High
Danish Pastry	325	(163)	12-15	5	Low
Pie Shells	350	(177)	12	5	Low
Cinnamon Buns	325	(163)	15-20	5	Low

* Some people prefer high speed for darker cheese.
** Low speed will give you a more uniform color.

MEAT & FISH PRODUCTS

Product	Temp. (°F)	(°C)	Time (min.)	No. Shelves	Fan Speed
Prime Rib (20 lb. rare) (9.1 kg)	250	(121)	2¾ Hr.	2	High
Rolled Roast Beef	275	(135)	2½ Hr.	2	High
Veal Roast Boned (15 lb.) (6.8 kg)	275	(135)	2½ Hr.	2	High
Stuffed Pork Chops	300	(149)	25-30	3	High
Lamb Chops	375	(190)	12	5	High
Steamship Round (80 lb.) (36.3 kg)	275	(135)	2¾ Hr.	1	High
Meatloaf	325	(163)	40	3	High
Hamburger Patties (4 oz.) (113 gr.)	400	(204)	8-10	5	High
Meat Pot Pies	375	(190)	40	5	High
Chicken Parts	300-325	(149-163)	30-40	5	High
Fish Sticks	350	(177)	18	5	High

MISCELLANEOUS PRODUCTS

Product	Temp. (°F)	(°C)	Time (min.)	No. Shelves	Fan Speed
Macaroni & Cheese	350	(177)	30	3	High
Cheese Sandwiches	375	(190)	10	5	Low
Baked Potatoes (6-8 oz.) (170-227 gr.)	450	(232)	45	5	High
Baked Potatoes (10 oz.) (283 gr.)	450	(232)	55	5	High
Stuffed Peppers	350	(177)	20	5	High
Scalloped Potatoes	325	(163)	35	5	High
Lasagna	250	(121)	90	3	High

FOR BEST RESULTS

Product to be cooked should be centered on the oven rack, and the racks should be spaced evenly within the oven cavity.

It is best not to rotate the product or open the doors during the cooking cycle.

Preheat oven to 50°F (10°C) higher than desired cooking temperature. After the oven is loaded, close the door and set thermostat to desired cooking temperature.

Make adjustments in the time, temperature and fan speed settings until the desired results are obtained. Adjust only one setting at a time. For example, if the product is too dark on the outside and not done on the inside, it is cooking too fast. Try reducing the temperature by 25°F (-4°C).

These cooking charts will be helpful in arriving at time, temperature and fan speed settings for products commonly cooked in convection ovens, but since each user's perception of how a particular product should be finished will be different, it may be necessary to make adjustments in the settings until the desired results are obtained.

When the desired results are obtained, make a note of the settings used for a particular recipe and product load. For example, if the user typically bakes four 18" x 26" (45.7cm x 66cm) sheet cakes using 5 lb. (2.25 kg) of batter for each cake, that would constitute a typical product load for that recipe. If the size of the load is changed, it may affect the final results. If the user changes either the weight of the cakes being baked, or the number of cakes being baked at a time, it may be necessary to make further adjustments in the time or temperature settings to achieve the desired results.

MAINTENANCE

WARNING: TURN OVEN OFF AND UNPLUG ELECTRICAL CORD BEFORE PERFORMING ANY MAINTENANCE.

LUBRICATION

The fan motor comes with sealed bearings and requires no lubrication.

The door hinges and mechanism require occasional lubrication with mineral oil.

DISCONNECTING THE GAS LINE RESTRAINT

If this oven is placed on casters, it should be connected to the supply piping with the proper disconnect device and restraint. If it is necessary to disconnect the restraint, first turn off the gas supply. Reconnect the restraint before turning the gas supply on and returning the oven to its original installation position.

VENT

Annually check the flue, when cool, to be sure it is free of obstructions.

REPLACING LAMPS

- Remove all racks by pulling forward, lifting up and out.
- Remove the right rack support by lifting up.
- Unscrew glass dome from light body.
- Replace the bulb.
- Reassemble glass dome, rack support and racks by reversing the disassembly procedure.

SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this oven, contact the Vulcan-Hart Service Agency in your area (refer to listing supplied with the oven), or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.

TROUBLESHOOTING

If the NO IGNITION LIGHT remains lit for more than 20 seconds after three trials (Model GCO2D), or if E-05 displays after three trials (Model GCO2C):

- Turn oven off for 5 minutes before attempting to relight.
- Check gas supply valves to be sure they are open.
- Check electrical power source and connections.
- Call your local Vulcan authorized service representative.

NOTES